

A dirty memory subsystem includes storage operable to store redundant copies of dirty indicators. Each dirty indicator is associated with a respective block of main memory and is settable to a predetermined state to indicate that the block of main memory associated therewith has been dirtied. By providing redundant storage for the dirty indicators, any difference between the stored copies of the dirty indicators can be considered as indicative of memory corruption, for example as a result of a cosmic ray impact. As the different copies can be stored in different locations, it is unlikely that a cosmic ray impact would affect all copies equally. If a difference between the stored copies is detected, then the dirty indicator can be taken as being unreliable and remedial action can be taken. For example, it can be assumed that a block of main memory has been dirtied if any of the copies of the dirty indicator has the predetermined state. Such a memory finds application in a method of managing reinstatement of an equivalent memory state in the main memory of a plurality of processing sets of a fault tolerant computer following a lock step error.

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